GPS

Global Positioning System



The GPS is the global positioning system that is based on a satellite connected system that helps in navigating through the streets by sending a signal to the satellite and back to the device and can accurately pin-point the devices position on the planet.

**How it Works**

GPS satellites circle the earth twice a day in different accurate orbit and transmit signals to the earth. GPS receivers take this information and calculate the user's exact location. Essentially, the GPS receiver compares the time a signal was transmitted by a satellite with the time it was received. The time difference tells the GPS receiver how far away the satellite is. With the distance measurements from a few more satellites, the receiver can determine the user's position and display it on the unit's e-map. [[1]](#endnote-1)

[](http://www8.garmin.com/products/spIII/)

A GPS receiver must be locked on to the signal of at least three satellites to calculate a 2D position by calculating the latitude and longitude and track the user’s movement. With four or more satellites in view, the receiver can determine the user's 3D position and can calculate the latitude, longitude and altitude. Once the user's position has been determined, the GPS unit can calculate other information, such as speed, bearing, track, trip distance, distance to destination, sunrise and sunset time and more.[[2]](#endnote-2)

1. http://en.wikipedia.org/wiki/Global\_Positioning\_System [↑](#endnote-ref-1)
2. <http://www8.garmin.com/aboutGPS/> [↑](#endnote-ref-2)